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NEWS	3	APR	03	CAS coverage of exemplified prophetic substances enhanced
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NEWS	6	APR	26	USPATFULL and USPAT2 enhanced with patent assignment/reassignment information
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NEWS	14	MAY	15	INPADOCDB and INPAFAMDB enhanced with Chinese legal status data
NEWS	15	MAY	28	CAS databases on STN enhanced with NANO super role in records back to 1992
NEWS	16	JUN	01	CAS REGISTRY Source of Registration (SR) searching enhanced on STN
NEWS	17	JUN	26	NUTRACEUT and PHARMAML no longer updated
NEWS	18	JUN	29	IMSCOPROFILE now reloaded monthly
NEWS	19	JUN	29	EPFULL adds Simultaneous Left and Right Truncation (SLART) to AB, MCLM, and TI fields
NEWS	20	JUL	09	PATDPAFULL adds Simultaneous Left and Right Truncation (SLART) to AB, CLM, MCLM, and TI fields
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=> s (protein polymer production)

6 FILES SEARCHED...
L1 22 (PROTEIN POLYMER PRODUCTION)

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L2 0 L1 AND (PROTEIN POLYMER CONJUGATE)

=> s 11 and (metal chelator)

L3 0 L1 AND (METAL CHELATOR)

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                 SCHMIDT ZUM BERGE M/AU
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E5
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E6
                SCHMIDTA MATTHIAS/AU
E7
                SCHMIDTA R/AU
E8
                 SCHMIDTA W/AU
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                 SCHMIDTA WOLFGANG/AU
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L1 ANSWER 1 OF 22 USPATFULL on STN

TI Novel peptides comprising repetitive units of amino acids and DNA sequences encoding the same

AB Novel polypeptides comprising repetitive units of amino acids, as well as synthetic genes encoding the subject polypeptides are provided. The subject polypeptides are characterized by comprising repetitive units of amino acids, where the repetitive units are present in naturally occurring proteins, particularly naturally occurring structural proteins. The subject polypeptides find use in a variety of applications, such as structural components of prosthetic devices, synthetic fibers, and the like.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2009:103565 USPATFULL

TITLE: Novel peptides comprising repetitive units of amino

acids and DNA sequences encoding the same

INVENTOR(S): Ferrari, Franco A., La Jolla, CA, UNITED STATES

Cappello, Joseph, San Diego, CA, UNITED STATES

PATENT ASSIGNEE(S): Protein Polymer Technologies, Inc. (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 20090093621 A1 20090409 APPLICATION INFO.: US 2006-415484 A1 20060427 (11)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2002-96986, filed on 12 Mar

2002, ABANDONED Division of Ser. No. US 1999-444791, filed on 22 Nov 1999, Pat. No. US 6355776 Continuation of Ser. No. US 1995-482085, filed on 7 Jun 1995, Pat.

No. US 6018030 Utility

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORGAN, LEWIS & BOCKIUS, LLP, ONE MARKET SPEAR STREET

TOWER, SAN FRANCISCO, CA, 94105, US

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

EXEMPLARY CLAIM: 1-20 NUMBER OF DRAWINGS: 10 Drawing Page(s)

LINE COUNT: 5424
CAS INDEXING IS AVAILABLE FOR THIS PATENT.

AS INDEXING IS AVAILABLE FOR THIS PAIENT.

L1 ANSWER 2 OF 22 USPATFULL on STN

TI Methods for Treating Body Tissue

AB Methods of treating body tissue including repairing defects in body tissue as well as augmenting body tissue. Body tissue defects are repaired by injecting a polymeric adhesive composition through an injector into the region of the defect and allowing the adhesive composition to cure to repair the defect or to form an implant that adheres to at least one surface tissue in the region of the defect. Body tissue is augmented by filling a defect void with a polymeric adhesive composition and allowing it to cure.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2009:31444 USPATFULL

TITLE: Methods for Treating Body Tissue

INVENTOR(S): Stedronsky, Erwin R., San Clemente, CA, UNITED STATES

Cappello, Joseph, San Diego, CA, UNITED STATES

PATENT ASSIGNEE(S): Protein Polymer Technologies, Inc., San Diego, CA,

UNITED STATES (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 20090028813 A1 20090129 APPLICATION INFO.: US 2007-877572 A1 20071023 (11)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2005-201606, filed on 10

Aug 2005, PENDING Continuation of Ser. No. US 2002-117931, filed on 5 Apr 2002, Pat. No. US 7300663 Continuation of Ser. No. US 1999-451206, filed on 29 Nov 1999, Pat. No. US 6423333 Continuation of Ser. No.

US 1996-642246, filed on 2 May 1996, Pat. No. US 6033654 Continuation-in-part of Ser. No. US

1995-435641, filed on 5 May 1995, Pat. No. US 5817303

DOCUMENT TYPE: Utility
FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORGAN, LEWIS & BOCKIUS, LLP, ONE MARKET SPEAR STREET

TOWER, SAN FRANCISCO, CA, 94105, US

NUMBER OF CLAIMS: 12 EXEMPLARY CLAIM: 1

LINE COUNT: 2919

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 3 OF 22 USPATFULL on STN

TI Methods for Treating Body Tissue

AB Methods of treating body tissue including repairing defects in body tissue as well as augmenting body tissue. Body tissue defects are repaired by injecting a polymeric adhesive composition through an injector into the region of the defect and allowing the adhesive composition to cure to repair the defect or to form an implant that adheres to at least one surface tissue in the region of the defect. Body tissue is augmented by filling a defect void with a polymeric adhesive composition and allowing it to cure.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2009:25568 USPATFULL

TITLE: Methods for Treating Body Tissue

INVENTOR(S): Stredonsky, Edwin R., San Clemente, CA, UNITED STATES Cappello, Joseph, San Diego, CA, UNITED STATES

PATENT ASSIGNEE(S): Protein Polymer Technologies, Inc., San Diego, CA,

UNITED STATES (U.S. corporation)

RELATED APPLN. INFO.: Continuation of Ser. No. US 2005-201606, filed on 10

Aug 2005, PENDING Continuation of Ser. No. US 2002-117931, filed on 5 Apr 2002, Pat. No. US 7300663 Continuation of Ser. No. US 1999-451206, filed on 29

Nov 1999, Pat. No. US 6423333 Continuation of Ser. No. US 1996-642246, filed on 2 May 1996, Pat. No. US 6033654 Continuation-in-part of Ser. No. US

1995-435641, filed on 5 May 1995, Pat. No. US 5817303

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: MORGAN, LEWIS & BOCKIUS, LLP, ONE MARKET SPEAR STREET

TOWER, SAN FRANCISCO, CA, 94105, US

NUMBER OF CLAIMS: 22 EXEMPLARY CLAIM: 1 LINE COUNT: 2942

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 4 OF 22 USPATFULL on STN

TI Methods for treating body tissue

AB Methods of treating body tissue including repairing defects in body tissue as well as augmenting body tissue. Body tissue defects are repaired by injecting a polymeric adhesive composition through an injector into the region of the defect and allowing the adhesive composition to cure to repair the defect or to form an implant that adheres to at least one surface tissue in the region of the defect. Body tissue is augmented by filling a defect void with a polymeric adhesive composition and allowing it to cure.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2006:33871 USPATFULL

TITLE: Methods for treating body tissue

INVENTOR(S): Stedronsky, Erwin R., San Clemente, CA, UNITED STATES

Cappello, Joseph, San Diego, CA, UNITED STATES

NUMBER KIND DATE PATENT INFORMATION: US 20060029638 A1 20060209 US 2005-201606 A1 20050810 (11) APPLICATION INFO.: RELATED APPLN. INFO.: Continuation of Ser. No. US 2002-117931, filed on 5 Apr 2002, PENDING Continuation of Ser. No. US 1999-451206, filed on 29 Nov 1999, GRANTED, Pat. No. US 6423333 Continuation of Ser. No. US 1996-642246, filed on 2 May 1996, GRANTED, Pat. No. US 6033654 Continuation-in-part

of Ser. No. US 1995-435641, filed on 5 May 1995, GRANTED, Pat. No. US 5817303

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: DORSEY & WHITNEY LLP, 555 CALIFORNIA STREET, SUITE 1000, SUITE 1000, SAN FRANCISCO, CA, 94104, US

NUMBER OF CLAIMS: 46 EXEMPLARY CLAIM: 1

LINE COUNT: 3068

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 5 OF 22 USPATFULL on STN

ΤI Intein-mediated protein splicing AB

The present invention provides methods for intein-mediated protein splicing, particularly in plants. This permits in vivo and in vitro synthesis of homogeneous and large multi-functional hybrid protein polymers and circular proteins. Additionally, methods are provided which are suitable for the regulation of transgene expression, such that a particular transgene is expressed only under selected environmental conditions, in selected plant tissues, at selected development stages, or in selected plant generations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2004:222914 USPATFULL

TITLE: Intein-mediated protein splicing

INVENTOR(S): Yadav, Narendra S., Chadds Ford, PA, UNITED STATES

Yang, Jianjun, Hockessin, DE, UNITED STATES

NUMBER KIND DATE PATENT INFORMATION: US 20040172688 A1 20040902 APPLICATION INFO.: US 2004-799326 A1 20040312 (10)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 2003-356088, filed on 31 Jan 2003, PENDING

NUMBER DATE

----------PRIORITY INFORMATION: US 2002-354395P 20020204 (60)

DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417

LANCASTER PIKE, WILMINGTON, DE, 19805

57 NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 19 Drawing Page(s)

LINE COUNT: 4122

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 6 OF 22 USPATFULL on STN

TT Synthetic proteins for in vivo drug delivery and tissue augmentation AB Methods and compositions are provided which are useful for delivering a biologically active substance to a localized site in vivo and for altering the physical dimensions of a body tissue. These methods and compositions employ protein polymers having varying ratios of elastin-like, collagen-like, keratin-like repeating units and repeating units which promote protein crystallization such as silk-like repeating units. By varying the length of segments of the repeating units and/or the concentration of the protein polymers in the composition, the rate of delivery of a biologically active substance to a localized site can be greatly varied. Moreover, because the compositions are capable of acquiring a non-liquid form under normal physiological conditions, they

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:251566 USPATFULL

TITLE: Synthetic proteins for in vivo drug delivery and tissue

augmentation

INVENTOR(S): Cappello, Joseph, San Diego, CA, UNITED STATES Stedronsky, Erwin R., La Jolla, CA, UNITED STATES

Protein Polymer Technologies, Inc. (U.S. corporation) PATENT ASSIGNEE(S):

find use as biocompatible tissue augmentation products.

NUMBER KIND DATE US 20030176355 A1 20030918 US 2002-131395 A1 20020422 PATENT INFORMATION:

APPLICATION INFO.: 20020422 (10) RELATED APPLN. INFO.: Division of Ser. No. US 1997-806029, filed on 24 Feb

1997, GRANTED, Pat. No. US 6380154 Continuation-in-part

of Ser. No. US 1994-212237, filed on 11 Mar 1994,

GRANTED, Pat. No. US 5606019

Utility DOCUMENT TYPE: APPLICATION

FILE SEGMENT:

LEGAL REPRESENTATIVE: FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP, Suite 3400, Four Embarcadero Center, San Francisco, CA, 94111-4187

NUMBER OF CLAIMS: 38

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 8 Drawing Page(s) LINE COUNT: 2388

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 7 OF 22 USPATFULL on STN

ΤI Intein-mediated protein splicing

AB The present invention provides methods for intein-mediated protein splicing, particularly in plants. This permits in vivo and in vitro synthesis of homogeneous and large multi-functional hybrid protein polymers and circular proteins. Additionally, methods are provided which are suitable for the regulation of transgene expression, such that a particular transgene is expressed only under selected environmental conditions, in selected plant tissues, at selected development stages, or in selected plant generations.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:239373 USPATFULL

TITLE: Intein-mediated protein splicing

Yadav, Narendra S., Chadds Ford, PA, UNITED STATES INVENTOR(S):

Yang, Jianjun, Hockessin, DE, UNITED STATES

NUMBER KIND DATE PATENT INFORMATION: US 20030167533 A1 20030904 APPLICATION INFO.: US 2003-356088 A1 20030131 (10)

DATE NUMBER

PRIORITY INFORMATION: US 2002-354395P 20020204 (60)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: E I DU PONT DE NEMOURS AND COMPANY, LEGAL PATENT RECORDS CENTER, BARLEY MILL PLAZA 25/1128, 4417

LANCASTER PIKE, WILMINGTON, DE, 19805

NUMBER OF CLAIMS: 57

EXEMPLARY CLAIM: NUMBER OF DRAWINGS: 18 Drawing Page(s)

LINE COUNT: 3908

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 8 OF 22 USPATFULL on STN

ΤI Tissue adhesive using synthetic crosslinking

AB Proteinaceous polymers having repetitive units from naturally occurring structural proteins are employed as backbones for functionalities for crosslinking to provide strongly adherent tissue adhesives and sealants. Particularly, block copolymers of elastin and fibroin are employed having lysine substitutions in spaced apart units, where the amino group

can be crosslinked using difunctional crosslinking agents.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:152923 USPATFULL

TITLE: Tissue adhesive using synthetic crosslinking

Stedronsky, Erwin R., San Clemente, CA, UNITED STATES INVENTOR(S):

Cappello, Joseph, San Diego, CA, UNITED STATES Protein Polymer Technologies (U.S. corporation) PATENT ASSIGNEE(S):

NUMBER KIND DATE ----US 20030104589 A1 20030605 PATENT INFORMATION: US 7300663 B2 20071127 US 7300663 B2 20071127 US 2002-117931 A1 20020405 (10) APPLICATION INFO.:

RELATED APPLN. INFO.: Continuation of Ser. No. US 1999-451206, filed on 29 Nov 1999, GRANTED, Pat. No. US 6423333 Continuation of Ser. No. US 1996-642246, filed on 2 May 1996, GRANTED, Pat. No. US 6033654 Continuation-in-part of Ser. No. US

1995-435641, filed on 5 May 1995, GRANTED, Pat. No. US

5817303 DOCUMENT TYPE: Utility FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: RICHARD F. TRECARTIN, ESQ., FLEHR HOHBACH TEST

ALBRITTON & HERBERT LLP, Suite 3400, Four Embarcadero

Center, San Francisco, CA, 94111-4187

NUMBER OF CLAIMS: 28 EXEMPLARY CLAIM:

LINE COUNT: 3098

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 9 OF 22 USPATFULL on STN

Novel peptides comprising repetitive units of amino acids and DNA

sequences encoding the same Novel polypeptides comprising repetitive units of amino acids, as well as synthetic genes encoding the subject polypeptides are provided. The subject polypeptides are characterized by comprising repetitive units of amino acids, where the repetitive units are present in naturally occurring proteins, particularly naturally occurring structural proteins. The subject polypeptides find use in a variety of

applications, such as structural components of prosthetic devices, synthetic fibers, and the like.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2003:120980 USPATFULL

TITLE: Novel peptides comprising repetitive units of amino

acids and DNA sequences encoding the same

INVENTOR(S): Ferrari, Franco A., La Jolla, CA, UNITED STATES
Richardson, Charles, Florence, MT, UNITED STATES
Chambers, James, Encinitas, CA, UNITED STATES
Causeur, Stuart, Pale Alira, CA, UNITED STATES

Causey, Stuart, Palo Alto, CA, UNITED STATES Pollock, Thomas J., San Diego, CA, UNITED STATES Cappello, Joseph, San Diego, CA, UNITED STATES Crissman, John W., San Diego, CA, UNITED STATES

PATENT ASSIGNEE(S): Protein Polymer Technologies, Inc. (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 20030083464 A1 203050

PATENT INFORMATION: US 20030083464 A1 20030501 APPLICATION INFO: US 2002-96986 A1 20020312 (10)

RELATED APPLN. INFO.: Division of Ser. No. US 1999-444791, filed on 22 Nov 1999, GRANTED, Pat. No. US 6355776 Continuation of Ser. No. US 1995-482085, filed on 7 Jun 1995, GRANTED, Pat. No. US 6018030 Continuation-in-part of Ser. No. US 1993-175155, filed on 29 Dec 1993, GRANTED, Pat. No. US 5641648 Continuation-in-part of Ser. No. US 1993-53049, filed on 22 Apr 1993, ABANDONED Continuation of Ser.

No. US 1987-114618, filed on 29 Oct 1987, GRANTED, Pat. No. US 5243038 Continuation-in-part of Ser. No. US 1986-927258, filed on 4 Nov 1986, ABANDONED

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FLEHR HOHBACH TEST ALBRITTON & HERBERT LLP, Suite 3400,
Four Embarcadero Center, San Francisco, CA, 94111-4187

NUMBER OF CLAIMS: 20

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 10 Drawing Page(s)

LINE COUNT: 5286

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- L1 ANSWER 10 OF 22 USPATFULL on STN
- TI Sealing or filling tissue defects using polyfunctional crosslinking agents and protein polymers
- AB Proteinaceous polymers having repetitive units from naturally occurring structural proteins are employed as backbones for functionalities for crosslinking to provide strongly adherent tissue adhesive compositions for bonding together separated tissue, and for sealing or filling tissue defects by injecting the compositions into the defects. Particularly, block copolymers having repeating units of elastin and fibroin are employed having lysine substitutions in spaced apart units, where the amino group can be crosslinked using difunctional crosslinking agents such as glutaraldehyde, activated diolefins, diisocyanates, acid anhydrides or diamines. The protein polymer contains at least 40 weight percent of repetitive units of 3 to 30 amino acids, preferably 3 to 15 amino acids, of at least one naturally occurring structural protein and at least two amino acids containing a functional group capable of reacting with the crosslinking agent. The protein polymer generally has a molecular weight of at least about 30 kD and not more than 250 kD. A preferred protein polymer contains at least 70 weight percent of repetitive units of Gly-Ala-Gly-Ala-Gly-Ser and Gly-Val-Gly-Val-Pro, where in at least two units an amino acid is substituted with one of

lysine or arginine, and the protein polymer has a lysine and arginine equivalent weight in the range of 1 to 20 kD and contains at least two amino acids having a functional group capable of reacting with at least one of aldehyde, isocyanate, thioisocyanate and activated carboxy. The protein polymer is produced by recombinant DNA technology, and a kit may be formed containing the crosslinking agent and protein polymer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

2002:181388 USPATFULL ACCESSION NUMBER:

TITLE: Sealing or filling tissue defects using polyfunctional

crosslinking agents and protein polymers

INVENTOR(S): Stedronsky, Erwin R., San Clemente, CA, United States

Cappello, Joseph, San Diego, CA, United States

PATENT ASSIGNEE(S): Protein Polymer Technologies, Inc., San Diego, CA,

United States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 6423333 B1 20020723 APPLICATION INFO.: US 1999-451206 19991129

RELATED APPLN. INFO.: Continuation of Ser. No. US 1996-642246, filed on 2 May

1996, now patented, Pat. No. US 6033654

Continuation-in-part of Ser. No. US 1995-435641, filed

on 5 May 1995, now patented, Pat. No. US 5817303

DOCUMENT TYPE: Utility

FILE SEGMENT: GRANTED PRIMARY EXAMINER: Naff, David M.

LEGAL REPRESENTATIVE: Flehr Hohbach Test Albritton & Herbert, Trecartin,

Esq., Richard F. NUMBER OF CLAIMS:

EXEMPLARY CLAIM:

AB

NUMBER OF DRAWINGS: 0 Drawing Figure(s); 0 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

T. 1 ANSWER 11 OF 22 USPATFULL on STN

TΙ SYNTHETIC PROTEINS FOR IN VIVO DRUG DELIVERY AND TISSUE AUGMENTATION

Methods and compositions are provided which are useful for delivering a biologically active substance to a localized site in vivo and for altering the physical dimensions of a body tissue. These methods and compositions employ protein polymers having varying ratios of elastin-like, collagen-like, keratin-like repeating units and repeating units which promote protein crystallization such as silk-like repeating units. By varying the length of segments of the repeating units and/or the concentration of the protein polymers in the composition, the rate of delivery of a biologically active substance to a localized site can be greatly varied. Moreover, because the compositions are capable of acquiring a non-liquid form under normal physiological conditions, they find use as biocompatible tissue augmentation products.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:85525 USPATFULL

TITLE: SYNTHETIC PROTEINS FOR IN VIVO DRUG DELIVERY AND TISSUE

AUGMENTATION

INVENTOR(S): CAPPELLO, JOSEPH, SAN DIEGO, CA, UNITED STATES STEDRONSKY, ERWIN R., SAN DIEGO, CA, UNITED STATES

NUMBER KIND DATE US 20020045567 A1 20020418 PATENT INFORMATION: US 6380154 B2 20020430 APPLICATION INFO.: US 1997-806029 A1 19970224 (8)

DOCUMENT TYPE: Utility

FILE SEGMENT: APPLICATION

LEGAL REPRESENTATIVE: FLEHR HOHBACH TEST ALBRITTON AND HERBERT, SUITE 3400,

FOUR EMBARCADERO CENTER, SAN FRANCISCO, CA. 94111

NUMBER OF CLAIMS: 38

EXEMPLARY CLAIM:

8 Drawing Page(s) LINE COUNT: 2392

NUMBER OF DRAWINGS:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 12 OF 22 USPATFULL on STN

ΤI Peptides comprising repetitive units of amino acids and DNA sequences encoding the same

AB Novel polypeptides comprising repetitive units of amino acids, as well as synthetic genes encoding the subject polypeptides are provided. The subject polypeptides are characterized by comprising repetitive units of amino acids, where the repetitive units are present in naturally occurring proteins, particularly naturally occurring structural proteins. The subject polypeptides find use in a variety of applications, such as structural components of prosthetic devices,

synthetic fibers, and the like. CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2002:51095 USPATFULL

TITLE: Peptides comprising repetitive units of amino acids and

DNA sequences encoding the same

Ferrari, Franco A., La Jolla, CA, United States INVENTOR(S):

Richardson, Charles, Florence, MT, United States Chambers, James, San Diego, CA, United States Causey, Stuart, Palo Alto, CA, United States Pollock, Thomas J., San Diego, CA, United States Cappello, Joseph, San Diego, CA, United States Crissman, John W., San Diego, CA, United States

Protein Polymer Technologies, Inc., San Diego, CA, PATENT ASSIGNEE(S):

United States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 6355776 B1 20020312 US 1999-444791 APPLICATION INFO.: 19991122 (9)

RELATED APPLN. INFO.: Continuation of Ser. No. US 1995-482085, filed on 7 Jun

1995, now patented, Pat. No. US 6018030

Continuation-in-part of Ser. No. US 1993-175155, filed on 29 Dec 1993, now patented, Pat. No. US 5641648, issued on 24 Jun 1997 Continuation-in-part of Ser. No. US 1993-53049, filed on 22 Apr 1993, now abandoned Continuation of Ser. No. US 1987-114618, filed on 29

Oct 1987, now patented, Pat. No. US 5243038, issued on 7 Sep 1993 Continuation-in-part of Ser. No. US

1986-927258, filed on 4 Nov 1986, now abandoned Utility

DOCUMENT TYPE: FILE SEGMENT: GRANTED McKelvey, Terry PRIMARY EXAMINER:

ASSISTANT EXAMINER: Sandals, William

LEGAL REPRESENTATIVE: Flehr Hohbach Test Albritton & Herbert LLP, Trecartin, Esq., Richard F.

NUMBER OF CLAIMS: EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 14 Drawing Figure(s); 10 Drawing Page(s)

LINE COUNT: 5152 CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- L1 ANSWER 13 OF 22 USPATFULL on STN
- TI Bonding together tissue with adhesive containing polyfunctional

crosslinking agent and protein polymer

AB Proteinaceous polymers having repetitive units from naturally occurring structural proteins are employed as backbones for functionalities for crosslinking to provide strongly adherent tissue adhesives and sealants. Particularly, block copolymers having repeating units of elastin and fibroin are employed having lysine substitutions in spaced apart units, where the amino group can be crosslinked using difunctional crosslinking agents. The protein polymer contains at least 40 weight percent of repetitive units of 3 to 30 amino acids of at least one naturally occurring structural protein and at least two functional groups capable of reacting with a crosslinking agent to form a strongly adherent adhesive composition for bonding together separated tissue or for sealing tissue defects. A preferred adhesive composition contains glutaraldehyde or polymethylene diisocyanate and a protein block copolymer of at least 30 kD containing at least 70 weight percent of repetitive units of Gly-Ala-Gly-Ala-Gly-Ser and Gly-Val-Gly-Val-Pro, where in at least two units an amino acid is substituted with one of lysine or arginine, and the copolymer has a lysine and arginine equivalent weight in the range of 3 to 15 kD. The protein polymer is produced by recombinant DNA technology, and a kit may be formed containing the crosslinking agent and protein polymer.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2000:27551 USPATFULL

TITLE: Bonding together tissue with adhesive containing polyfunctional crosslinking agent and protein polymer

INVENTOR(S): Stedronsky, Erwin R., San Clemente, CA, United States
Cappello, Joseph, San Diego, CA, United States

PATENT ASSIGNEE(S): Protein Polymer Technolgies, Inc., San Diego, CA,

United States (U.S. corporation)

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-435641, filed on 5 May 1995, now patented, Pat. No. US 5817303

On 5 May 1995, now patented, Pat. No. US 581/303
DOCUMENT TYPE: Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Naff, David M.

LEGAL REPRESENTATIVE: Trecartin, Richard F.Flehr Hohbach Test Albritton &

NUMBER OF CLAIMS: 24 EXEMPLARY CLAIM: 1

EXEMPLARY CLAIM: 1 LINE COUNT: 3117

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- L1 ANSWER 14 OF 22 USPATFULL on STN
- TI Peptides comprising repetitive units of amino acids and DNA sequences encoding the same
- AB Polypeptides comprising repetitive units of amino acids, as well as synthetic genes encoding the subject polypeptides are provided. The subject polypeptides are characterized by comprising repetitive units of amino acids, where the repetitive units are present in naturally occurring proteins, particularly naturally occurring structural proteins. The subject polypeptides find use in a variety of applications, such as structural components of prosthetic devices,

synthetic fibers, and the like.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 2000:10019 USPATFULL

TITLE: Peptides comprising repetitive units of amino acids and

DNA sequences encoding the same

Ferrari, Franco A., La Jolla, CA, United States INVENTOR(S):

Richardson, Charles, Florence, MT, United States Chambers, James, San Diego, CA, United States Causey, Stuart, Palo Alto, CA, United States Pollock, Thomas J., San Diego, CA, United States Cappello, Joseph, San Diego, CA, United States

Crissman, John W., San Diego, CA, United States Protein Polymer Technologies, Inc., San Diego, CA, PATENT ASSIGNEE(S):

United States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 6018030 20000125

US 6018030 20000125 US 1995-482085 19950607 (8) APPLICATION INFO.:

RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-175155, filed on 29 Dec 1993, now patented, Pat. No. US 5641648 which

is a continuation-in-part of Ser. No. US 1993-53049, filed on 22 Apr 1993, now abandoned which is a

continuation of Ser. No. US 1987-114618, filed on 29 Oct 1987, now patented, Pat. No. US 5243038, issued on

7 Sep 1993 which is a continuation-in-part of Ser. No. US 1986-927258, filed on 4 Nov 1986, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Degen, Nancy ASSISTANT EXAMINER: Sandals, William

LEGAL REPRESENTATIVE: Trecartin, Richard F.Flehr Hohbach Test Albritton &

Herbert LLP

NUMBER OF CLAIMS: 19

EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 14 Drawing Figure(s); 10 Drawing Page(s)

LINE COUNT: 6111

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

- ANSWER 15 OF 22 USPATFULL on STN
- TI Methods for preparing synthetic repetitive DNA

AB Methods are provided for the production of large polypeptides containing repeating sequences of amino acids utilizing biochemical techniques, specifically DNA sequences coding for the expression of the large polypeptides. Systems utilizing exogenous transcriptional and translational regions to control the production of the large polypeptides are also provided.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:134864 USPATFULL

TITLE: Methods for preparing synthetic repetitive DNA

INVENTOR(S): Ferrari, Franco A., La Jolla, CA, United States Cappello, Joseph, San Diego, CA, United States Crissman, John W., San Diego, CA, United States

Dorman, Mary A., San Diego, CA, United States PATENT ASSIGNEE(S): Protein Polymer Technologies, Inc., San Diego, CA,

United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: APPLICATION INFO.: RELATED APPLN. INFO.:

US 5830713 19981103 US 1996-707237 19960903 (8)

Continuation-in-part of Ser. No. US 1993-175155, filed on 29 Dec 1993, now patented, Pat. No. US 5641648 which is a continuation-in-part of Ser. No. US 1993-15304

is a continuation-in-part of Ser. No. US 1993-53049, filed on 22 Apr 1993, now abandoned which is a continuation-in-part of Ser. No. US 1990-609716, filed

on 6 Nov 1990, now patented, Pat. No. US 5514581, issued on 7 May 1996 which is a continuation-in-part of Ser. No. US 1988-269429, filed on 9 Nov 1988, now abandoned which is a continuation-in-part of Ser. No. US 1987-114618, filed on 19 Oct 1987, now patented, Pat. No. US 5243038, issued on 7 Sep 1993 which is a

continuation-in-part of Ser. No. US 1986-927258, filed on 4 Nov 1986, now abandoned

DOCUMENT TYPE: Utility
FILE SEGMENT: Granted
PRIMARY EXAMINER: Degen, Nancy

LEGAL REPRESENTATIVE: Trecartin, Richard F., Kresnak, Mark T.Flehr Hohbach

Test Albritton and Herbert

NUMBER OF CLAIMS: 37 EXEMPLARY CLAIM: 1

NUMBER OF DRAWINGS: 14 Drawing Figure(s); 10 Drawing Page(s)

LINE COUNT: 5084

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 16 OF 22 USPATFULL on STN

TI Bonding together tissue with adhesive containing polyfunctional

crosslinking agent and protein polymer

AB Proteinaceous polymers having repetitive units from naturally occurring structural proteins are employed as backbones for functionalities for crosslinking to provide strongly adherent tissue adhesives and sealants. Particularly, block copolymers having repeating units of elastin and fibroin are employed having lysine substitutions in spaced apart units, where the amino group can be crosslinked using difunctional crosslinking agents. The protein polymer contains at least 40 weight percent of repetitive units of 3 to 15 amino acids of at least one naturally occurring protein and in at least two units an amino acid is substituted by an amino acid containing a functional group capable of reacting with a crosslinking agent to form a strongly adherent adhesive composition for bonding together separated tissue or for sealing tissue defects. A preferred adhesive composition contains glutaraldehyde or polymethylene diisocyanate and a protein block copolymer of at least 30 kD containing at least 70 weight percent of repetitive units of Gly-Ala-Gly-Ala-Gly-Ser and Gly-Val-Gly-Val-Pro, where in at least two

Gay-Mal-Gly-Markety-Ser and Gay-Val-Gly-Val-Fro, where in at least two units an amino acid is substituted with lysine and the copolymer has a lysine equivalent weight in the range of 1 to 20 kD. The protein polymer is produced by recombinant DNA technology, and a kit can be formed containing the crosslinking agent and protein polymer.

containing the crossinking agent and protein polymer

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:122064 USPATFULL

TITLE: Bonding together tissue with adhesive containing polyfunctional crosslinking agent and protein polymer

INVENTOR(S): Stedronsky, Erwin R., San Clement, CA, United States Cappello, Joseph, San Diego, CA, United States PATENT ASSIGNEE(S): Protein Polymer Technologies, Inc., San Diego, CA,

United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5817303 19981006
APPLICATION INFO: US 1995-435641 19950505 (8) DOCUMENT TYPE: Utility

FILE SEGMENT: Granted
PRIMARY EXAMINER: Naff, David M.

LEGAL REPRESENTATIVE: Trecartin, Richard F., Kresnak, Mark T.Flehr Hohbach

Test Albritton and Herbert NUMBER OF CLAIMS:

23 EXEMPLARY CLAIM:

LINE COUNT: 1156

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

L1 ANSWER 17 OF 22 USPATFULL on STN

ΤТ Products comprising substrates capable of enzymatic cross-linking AB

Polymers are provided comprising protein polymers comprising blocks of repeating units and sequences comprising amino acids, individually or in defined sequences, capable of enzyme catalyzed covalent bond formation for cross-linking, as exemplified by glutamine and/or lysine reactive for FXIII catalyzed isopeptide formation or non-amino acid polymers having side chains comprising such amino acids or sequences, which may be used for preparation of articles of manufacture, particularly cross-linkable compositions. By appropriate choice of the polymer, resorbable implantable polymers may be used in internal applications for mammals as formed objects or depots.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:75722 USPATFULL

TITLE: Products comprising substrates capable of enzymatic

cross-linking

INVENTOR(S): Cappello, Joseph, San Diego, CA, United States PATENT ASSIGNEE(S): Protein Polymer Technologies, San Diego, CA, United

States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 5773577 19980630 APPLICATION INFO.: US 1995-397633 19950302 (8)

RELATED APPLN. INFO .: Continuation-in-part of Ser. No. US 1994-205518, filed

on 3 Mar 1994, now abandoned

DOCUMENT TYPE: Utility FILE SEGMENT: Granted

PRIMARY EXAMINER: Patterson, Jr., Charles L.
ASSISTANT EXAMINER: Stole, Einar

LEGAL REPRESENTATIVE: Trecartin, Richard F.Flehr Hohbach Test Albritton &

Herbert LLP

NUMBER OF CLAIMS: 29

EXEMPLARY CLAIM: LINE COUNT: 3006

AB

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 18 OF 22 USPATFULL on STN

TΙ High molecular weight collagen-like protein polymers

Collagen-like polymers having repetitive triads are produced having reduced proline content, where glycine is the initial amino acid and the subsequent amino acids are varied, while retaining at least a minimum percentage of prolines. The resulting polymers have collagen-like properties, but are capable of being produced in unicellular microorganisms at high molecular weights and in high efficiency. The polymers, while retaining collagen-like characteristics, include various novel sequences which impart new characteristics, finding wide use in photographic, medical, structural and fiber applications.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:75399 USPATFULL

High molecular weight collagen-like protein polymers TITLE: INVENTOR(S): Cappello, Joseph, San Diego, CA, United States

Ferrari, Franco A., La Jolla, CA, United States

Protein Polymer Technologies, Inc., San Diego, CA, PATENT ASSIGNEE(S): United States (U.S. corporation)

NUMBER KIND DATE

PATENT INFORMATION: US 5773249 19980630 US 1996-642255

APPLICATION INFO.: 19960502 (8) RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1995-577046, filed

on 22 Dec 1995 which is a continuation of Ser. No. US 1992-972032, filed on 5 Nov 1992, now patented, Pat. No. US 5496712, issued on 5 Mar 1996 which is a continuation-in-part of Ser. No. US 1991-791960, filed on 12 Nov 1991, now abandoned which is a

continuation-in-part of Ser. No. US 1990-609716, filed on 6 Nov 1990, now patented, Pat. No. US 5514581, issued on 7 May 1996 which is a continuation-in-part of Ser. No. US 1988-269429, filed on 9 Nov 1988, now

abandoned which is a continuation-in-part of Ser. No. US 1987-114618, filed on 29 Oct 1987, now patented, Pat. No. US 5243038, issued on 7 Sep 1993 which is a continuation-in-part of Ser. No. US 1986-927258, filed

on 4 Nov 1986, now abandoned

DOCUMENT TYPE: Utility

FILE SEGMENT: Granted

PRIMARY EXAMINER: Patterson, Jr., Charles L.

LEGAL REPRESENTATIVE: Flehr Hohbach Test Albritton and Herbert LLP,

Trecartin, Richard F., Kresnak, Mark T.

NUMBER OF CLAIMS: 32 EXEMPLARY CLAIM: LINE COUNT: 3042

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 19 OF 22 USPATFULL on STN

ΤI Peptides comprising repetitive units of amino acids and DNA sequences encoding the same

Novel polypeptides comprising repetitive units of amino acids, as well as synthetic genes encoding the subject polypeptides are provided. The subject polypeptides are characterized by comprising repetitive units of amino acids, where the repetitive units are present in naturally occurring proteins, particularly naturally occurring structural proteins. The subject polypeptides find use in a variety of applications, such as structural components of prosthetic devices, synthetic fibers, and the like.

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ACCESSION NUMBER: 1998:72720 USPATFULL

TITLE: Peptides comprising repetitive units of amino acids and

DNA sequences encoding the same

INVENTOR(S): Ferrari, Franco A., La Jolla, CA, United States Richardson, Charles, Florence, MT, United States Chambers, James, San Diego, CA, United States Causey, Stuart, Palo Alto, CA, United States Pollock, Thomas J., San Diego, CA, United States Cappello, Joseph, San Diego, CA, United States

Crissman, John W., San Diego, CA, United States

PATENT ASSIGNEE(S): Protein Polymer Technologies, Inc., San Diego, CA, United States (U.S. corporation)

NUMBER KIND DATE PATENT INFORMATION: US 5770697 19980623 US 1995-477509 APPLICATION INFO.: 19950607 (8) RELATED APPLN. INFO.: Continuation-in-part of Ser. No. US 1993-175155, filed

on 29 Dec 1993, now patented, Pat. No. US 5641648, issued on 24 Jun 1997 which is a continuation-in-part of Ser. No. US 1993-53049, filed on 22 Apr 1993, now abandoned which is a continuation of Ser. No. US 1987-114618, filed on 29 Oct 1987, now patented, Pat. No. US 5243038, issued on 7 Sep 1993 which is a continuation-in-part of Ser. No. US 1986-927258, filed

on 4 Nov 1986, now abandoned

Utility

DOCUMENT TYPE: FILE SEGMENT: Granted PRIMARY EXAMINER: Ketter, James ASSISTANT EXAMINER: Brusca, John S. LEGAL REPRESENTATIVE: Trecartin, Richard F.

NUMBER OF CLAIMS: 16 EXEMPLARY CLAIM:

NUMBER OF DRAWINGS: 14 Drawing Figure(s); 10 Drawing Page(s)

LINE COUNT:

CAS INDEXING IS AVAILABLE FOR THIS PATENT.

ANSWER 20 OF 22 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on L1

TТ Slow release protein polymers.

AB The invention features articles for delivery of a biologically active substance, methods for making such articles, and methods for treating an

animal using the articles. ACCESSION NUMBER: 2004:177201 BIOSIS

DOCUMENT NUMBER: PREV200400179186

TITLE: Slow release protein polymers.

AUTHOR(S): Rowe, Stephen C. [Inventor, Reprint Author]; Yim, Kalvin [Inventor]; Retnarajan, Beadle P. [Inventor]; Hubbell, Jeffrey A. [Inventor]; Annavajula, Durga [Inventor]

CORPORATE SOURCE: North Andover, MA, USA

ASSIGNEE: Pelias Technologies, Inc., Washington, DC, USA

PATENT INFORMATION: US 6699504 20040302

SOURCE: Official Gazette of the United States Patent and Trademark

Office Patents, (Mar 2 2004) Vol. 1280, No. 1.

http://www.uspto.gov/web/menu/patdata.html. e-file.

ISSN: 0098-1133 (ISSN print).

DOCUMENT TYPE: Patent

LANGUAGE: Enalish

ENTRY DATE: Entered STN: 31 Mar 2004

Last Updated on STN: 31 Mar 2004

ANSWER 21 OF 22 BIOSIS COPYRIGHT (c) 2009 The Thomson Corporation on L1

Functional recombinantly prepared synthetic protein polymer.

Novel polymers are provided which are produced by recombinant techniques. The polymers are characterized by having a small repeating sequence which provides for strands capable of associating, resulting in useful structural characteristics, where the strands are joined by turns or loops which are flexible and available for interaction with the environment. Specifically, repeating groups of naturally occurring proteins such as silk are modified by introduction of an amino-acid sequence at a site

which provides for a turn between strands to provide for readily available

oligopeptides capable of interacting with molecules in the environment.

ACCESSION NUMBER: 2001:243672 BIOSIS DOCUMENT NUMBER: PREV200100243672

TITLE: Functional recombinantly prepared synthetic protein

polymer.

AUTHOR(S): Ferrari, Franco A. [Inventor]; Cappello, Joseph [Inventor]

CORPORATE SOURCE: ASSIGNEE: Protein Polymer Technologies, Inc.

PATENT INFORMATION: US 6140072 20001031

SOURCE: Official Gazette of the United States Patent and Trademark

Office Patents, (Oct. 31, 2000) Vol. 1239, No. 5. e-file.

CODEN: OGUPE7. ISSN: 0098-1133.

DOCUMENT TYPE: Patent. LANGUAGE: English

ENTRY DATE: Entered STN: 23 May 2001

Last Updated on STN: 19 Feb 2002

ANSWER 22 OF 22 BIOTECHDS COPYRIGHT 2009 THOMSON REUTERS on STN

TΙ Engineering protein-based machines to emulate key steps in metabolism (biological energy conversion);

recombinant protein polymer production

with application to metabolic engineering

AN 1998-04032 BIOTECHDS

AB A unifying mechanism whereby proteins and protein-based polymers could

perform the diverse energy conversions of living organisms was proposed. Monomer genes encoding one repeat each of nine tricosamer peptides, with 1 glutamic acid residue per 30 mer and an increasing number of

phenylalanine residues replacing valine, were constructed using

chemically synthesized ss oligonucleotides (oligos). These oligos were annealed at their complementary ends and extended. The genes were cloned into plasmid pUC118. The gene fragment for each tricosamer was purified from digested pUC118 and concatenated in the presence of phage T4 DNA-ligase and synthetic oligo cloning adapters. Concatamer genes were recovered by cloning into pUC118, characterized by gel electrophoresis

and subcloned into vector plasmid pET13-d. Escherichia coli BL21(DE3) was transformed with pET13-d and cultured in a 2.5 or 28 1 fermentor. The polymers were purified from cell supernatant. The polymers were used

to demonstrate the interdependence of the waters of hydrophobic hydration, the onset temperature for the inverse temperature transition and

the pKa.

(47 ref)

ACCESSION NUMBER: 1998-04032 BIOTECHDS

TITLE: Engineering protein-based machines to emulate key steps in

metabolism (biological energy conversion);

recombinant protein polymer

production with application to metabolic

engineering

AUTHOR: Urry D W; Peng S O; Haves L C; McPherson D; Xu J; Woods T C;

Gowda D C: Pattanaik A

CORPORATE SOURCE: Univ.Alabama; Bioelastics-Research

Laboratory of Molecular Biophysics, The University of Alabama LOCATION:

at Birmingham, 1670 University Boulevard, Birmingham, AL

35294-0019, USA.

Email: danurry@uab.edu Biotechnol. Bioeng.; (1998) 58, 2-3, 175-90 SOURCE:

CODEN: BIBIAU

ISSN: 0006-3592

DOCUMENT TYPE: Journal LANGUAGE: English => d his

(FILE 'HOME' ENTERED AT 06:43:28 ON 14 JUL 2009)

FILE 'MEDLINE, USPATFULL, HCAPLUS, BIOSIS, BIOTECHDS, DGENE, EMBASE, WPIDS, SCISEARCH' ENTERED AT 06:44:09 ON 14 JUL 2009

22 S (PROTEIN POLYMER PRODUCTION)

L1

L2 0 S L1 AND (PROTEIN POLYMER CONJUGATE) L3

0 S L1 AND (METAL CHELATOR)

E HINDS, K/AU E LEWIS, D/AU

E CAMPELL, K/AU

E SCHMIDT, P/AU

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